

Compliance Assessment Report

Report ID:
CAR_NRW0031770

This form will report compliance with your permit as determined by an NRW officer

Site	Barry Site EPR/BU2110IS	Permit Ref	BU2110IS		
Operator/Permit holder	Cabot Carbon Ltd				
Regime	Installations				
Date of assessment	15/06/2017	Time in	N/A	Out	N/A
Assessment type	Report/Data Review				
Parts of the permit assessed	Routine monitoring, AMP, fugitives, EMS and water / waste reviews				
Lead officer's name	Kemp, Andi				
Accompanied by					
Recipient's name/position	Paula Lloyd/ Plant Environmental Manager	Date issued	16/06/2017		

Section 1 – Compliance Assessment Summary

This is based on the requirements of the permit under the Environmental Permitting Regulations or the licence under the Water Resources Act 1991 as amended by the Water Act 2003. A detailed explanation is captured in "Compliance Assessment Report Detail" (Section 2) and any actions you may need to take are given in the "Action(s)" (section 4). This summary details where we believe any non-compliance with the permit has occurred, the relevant condition and how the non-compliance has been categorised using our Compliance Classification Scheme (CCS). CCS Scores can be consolidated or suspended where appropriate, to reflect the impact of some non-compliances more accurately. For more details of our CCS scheme, contact your local office.

Permit conditions and compliance summary	CCS Category	Condition(s) breached
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KEY: See Section 5 for breach categories, suspended scores will be indicated as such.

A = Assessed or assessed in part (no evidence of non-compliance), **X** = Action only,

O = Ongoing non-compliance, not scored.

Number of breaches recorded	0	Total compliance score (see section 5 for scoring scheme)	0
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If the Number of breaches recorded is greater than zero, please see Section 3 for our proposed enforcement response

Section 2 – Compliance Assessment Report Detail

This section contains a report of our findings and will usually include information on:

- The part(s) of the permit that were assessed (eg. Maintenance, training, combustion plant, etc)
- Where the type of assessment was 'Data Review' details of the report/results triggering the assessment
- Any non-compliances identified
- Any non-compliances with directly applicable legislation
- Details of any multiple non-compliances
- Information on the compliance score accrued inc.
- Details of advice given
- Any other areas of concern
- Any actions requested
- Any examples of good practice
- A reference to photos taken

Compliance Assessment: Cabot Carbon, Barry (BU2110IS) – 16th June 2017

Purpose of Compliance

This CAR1 form covers the following aspects of regulation for the above operator and their environmental permit:

- Routine quarterly and annual monitoring data submissions
- Annual performance data
- Annual Environmental Management System improvement objectives
- Annual fugitive emissions report
- Waste and water efficiency audits – every 4 years
- Biennial Accident Management Plan review

Routine Monitoring Data Submissions

The following period is covered:

- Annual data – 2015 and 2016
- Quarterly data – Oct – Dec 2015; Jan – Mar 2016; Apr – Jun 2016; Jul – Sep 2016; Oct – Dec 2016; Jan – Mar 2017

Annual Air Emissions Data 2015 – 2016

Air emissions 2015 – All parameters have had data submitted for associated monitoring. All parameters are compliant with both monitoring requirements and any associated limits.

Air emissions 2016 – The same comments as above.

No discernible positive or negative trends are evident.

Emission point A3 is the steam raising boiler, with a thermal input of 9.22 MW (see permit decision document, based on permit application) and has no limits assigned to it, but there is an annual requirement to spot sample the boilers (under normal or maximum load) for CO and NO_x. The two annual rounds provide this data: CO - 73.4 mg/m³, 21.3 mg/m³; NO_x – 148 mg/m³, 79.5 mg/m³.

Regulation 35(1) of EPR makes Schedule 7 apply and Schedule 7 in turn requires the mentioned articles of the IED apply. What this means is that activities under Chapter II of IED (i.e. EPR installations) require BAT to be applied on an ongoing basis. The implication of this is that the operator should be looking at the relevant standards for combustion plant when they overhaul or replace their boilers. The recent Medium Combustion Plant Directive will be implemented via EPR late in 2017 and the direction of NO_x limits for new gas fired boilers (>5 MWth) will be 100 mg/m³. **The operator is advised to bear in mind ongoing BAT and MCPD standards when they review their boiler plant.**

In 2016 an OMA for air emissions and water emissions was carried out – see separate reports.

6 Monthly Air Emissions Data

Points A13 and A24 (treated silica reactors) have a combined 100 g/hour mass emission limit, to be verified every six months. The data supplied was from monitoring rounds of 13th May 2015 (A13), 9th Nov 2015 (A13 and A24), 25th Nov 2016 (A13 and A24) – the results are well below the limit.

Action 1 Cabot 16th June 2017 – Operator to clarify why only one result has been taken for the year 2016. Due: 31st July 2017

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Continuous and Quarterly Air Emissions Data 2015 – 2016 and Q1 2017

All parameters have been monitored and data submitted and all results are compliant.

Referring to the interim (pending full permit review) position that was reached when IP24 was signed off, which refers to CI2 at A1:

every quarter from 5 consecutive 30 min samples – averaged, but with results above 14.6 mg/m³ recorded, then each quarterly result averaged and compared to ELV of 10 mg/m³

All results are compliant, with one quarterly average exceeding 10 mg/m³ (19/05/2016) and one quarterly average approaching the ELV at 9.5 mg/m³ (28/02/2017).

What is missing though is the annual average figure derived from each quarterly average, starting from first full year ending June 2016 – this is what is used as a basis for compliance with the 10 mg/m³ ELV. It is noted that the operator has advised that the one exceedance of 10 mg/m³ (14.5 mg/m³ May 2016) was a result taken during a known event at the plant – although any more detail as to what the event was and how it influenced the result has not been elucidated upon. Refer to Notes 5 and 6 in Table 2.2.2 of the permit (variation: EPR/BU2110IS/V007, 05/08/15)

Action 2 Cabot 16th June 2017 – Operator to calculate the annual average from the 4 quarterly results over the 12 month period: Jul – Sep 2016, Oct – Dec 2015, Jan – Mar 2016, Apr – Jun 2016. **Due: 31st July 2017**

The next twelve month period would be July 2016 – Jun 2017 – although the regulator will accept:

- Deriving the first 12 month average as per Action 1 above
- Deriving the second 12 month average from Jul 2016 – Jun 2017

and

- Resetting the 12 month period to Jan 2017 – Dec 2017, reporting in Jan 2018

Action 3 Cabot 16th June 2017 – Operator to explain the event that led to the >10 mg/m³ result from May 2016. **Due: 31st July 2017**

With the continuous carbon monoxide monitoring several half hour averages approached the half hourly average ELV of 5250 mg/m³, but did not breach it: 2nd & 23rd Nov, 21st Dec 2015, 31st May, 23rd Jun, 25th Jul, 15th, 22nd & 30th Aug, 19th Sep, 5th, 13th & 31st Oct 2016, 3rd & 30th Jan, 19th, 20th & 27th Mar 2017. It is not known if these seemingly random and separate results are a monitoring instrument issue or a process issue – they are though below the limit, but it is prudent to investigate results that are close to the limit for any potential

underlying issues. Of course, experience and knowledge of many years data may show that this random pattern is in actual fact expected behaviour.

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Quarterly Emissions to Water

For the quarters where a sample was retrieved, the results are compliant and the methods as per the permit. A recommendation was given previously (Recommendation 1, 15th Jan 2016) with regard to periods when a sample cannot be taken, due to dry weather. Whilst in principle the regulator accepts this situation, the operator needs to consider the weather forecast and attempt to take a sample early on in the quarter – if then the rest of the period is dry, at least a sample has been retrieved.

Recommendation 1 Cabot 16th June 2017 – *the operator should consider that in a quarter when a sample cannot be retrieved, attention is paid to the discharge points when it does eventually rain in case of the possibility of flushing of stored contamination. A visual assessment should be sufficient, supplemented with knowledge about activities being carried out on plant at the time.*

Annual Performance Data

Annually the operator is required to submit a variety of performance data on forms specified in the permit and tables concerned. This data covers water and energy use, waste disposal or recovery and other performance indicators.

Waste Recovery or Disposal

Waste figures don't always reveal any obvious trend in total tonnages and this is usually down to some specific maintenance or construction project that generates more waste in one year than others. More useful metrics are amount of waste per tonne of product (can also be skewed by the previous point), amount of hazardous waste and amount of waste sent for recovery rather than disposal – which includes landfill, destructive treatment and incineration.

Taking on board these limitations, the total waste produced was:

2015	Disposed	Recovered
Hazardous -	40.12	1.72

Non-hazardous -	218.60	129.70
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2016

Hazardous -	99.70	4.70
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Non-hazardous -	330.90	257.05
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The operator has explained some of the increases seen in the 2016 figures: interceptor pit emptying; civils work; and end of shelf life products.

Water Use

Water use was slightly less in 2016 than 2015, though slightly more mains water used in 2016 vs 2015 and the m³/t of product was slightly increased in 2016 vs 2015. Overall water use shows a decreasing trend in use from 2006, although this is not a linear trend year on year.

The Regulatory Officer will be assessing the 4 yearly water efficiency audit further on in this assessment report.

Energy Use

Energy used and CO₂ produced are comparable for 2015 and 2016. The overall trend since 2006 is one of decreasing energy usage and CO₂.

Performance Indicators

As mentioned overall trends appear to be decreasing, with the exception of waste in 2016 – due to maintenance and construction works and end of life silica product consigned to landfill.

Even though the primary energy consumption is less for 2016, the energy in kWh/t product is larger for 2016 than 2015. The picture is still one of less energy used per tonne of production in 2016 than in 2006.

The operator is commended for continually exploring ways to improve production and quality, while being

more resource efficient in the process.

Annual Environmental Management System Objectives & Progress

An update has been received for year 2016 and this update notes a previous NRW recommendation and explains a diversion of off quality silica to a company who use it in place of another raw material in their polymeric rubber.

NRW has these two comments to make in respect of the two points above:

1. At the next site inspection, NRW and the operator will discuss and plan assessment of parts of the overall EMS and procedures applied at the site. Taking on board Recommendation 3 from BU2110IS/025572. With a view of conducting an in depth assessment later in the year.
2. At the next site inspection NRW wants to discuss the protocols around the waste silica going to a third party.

The objectives in the 2016 submission are ongoing targets around waste diversion from landfill, permit non-compliances and OQ silica. Point 1. above will look at this in more detail.

Annual Fugitive Emissions Report

The data provided for annual fugitive emissions review 2016 shows two developments or continued developments, i.e. overall mass released still a decreasing trend since 2012, although 2016 figures higher than 2015 and secondly the number of events has decreased slightly 2014, 2015 to 2016.

Explanations have been provided for several of the events reported.

Over the three years data AK has seen for 2014 – 2016, it is clear that there are not many sources of potentially significant fugitive emission losses. However, in previous CAR1 forms the regulator has advised the operator to list the inventory across wastes, raw materials and products and cross reference this to their uses and storage modes and then examine control, surveillance and measurement methods. This is the sort of exercise that need only be performed periodically.

AK will discuss this with the operator during the next inspection.

Waste Minimisation & Water Efficiency Audits

The highlights from the waste minimisation work carried out at Cabot show positives in these areas:

- Bin less offices
- Less OQ material produced, while production increases
- Improvements and refinements to technical areas of the process, e.g. H₂ regulators in feedstock management to reduce product variability
- Sourced a user for off specification (for traditional customers) fumed silica, as long as the manufacturers grade specification is met

Cabot are still exploring recovery or re-use (diversion from landfill) routes for the treated silica. Overall continued good performance, although it would be interesting to see the waste figures by specific waste description (spent solvents, oils, plastic, acids etc.) in order to fully appreciate and assess where Cabot are with:

1. Waste minimisation
2. Waste re-use
3. Waste recovery / recycling
4. Disposal streams – what streams – where

In terms of water use, the previous performance indicator data shows an overall decreasing trend in water use. As a result of an IC in the original permit, water use of unmetered water is monitored as an early warning of possible underground leaks. A combination and balancing of reducing cooling water blow down and use of blow down to seal vacuum pumps has led to overall decreases of blow down water. Additionally uncontaminated surface water has been diverted through the on site separator as opposed to DCL sewer – i.e. back into the Cadoxton – whether uncontaminated surface water can ever serve a use in place of mains water is unknown to the regulator at the moment.

It is clear that Cabot regard water efficiency as important. Some sectors have more opportunity to reduce water use and these typically are big users, such as food and drink sites. In Cabot, the water use is fairly modest, but nonetheless their efforts to further explore reductions and re-use are welcomed.

Accident Management Plan Review

Comments and actions have been mentioned and completed in previous CAR1 forms. The review being assessed here is dated 16th Jan 2017.

Developments for 2017 include:

- Emergency preparedness training
- Adoption of the METHANE protocol – used by the emergency services
- HCl gas release evacuation and response drill
- Ongoing liaison with the wider chemical complex

These additional points allied to the current Emergency Plan (which includes drawings, plans, contact numbers and other relevant procedures) provide the regulator with some confidence that the emergency provisions are sufficient at this site.

END

EPR Compliance Assessment Report

**Report ID:
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Site	Barry Site EPR/BU2110IS	Permit Ref	BU2110IS
Operator/Permit holder	Cabot Carbon Ltd	Date	15/06/2017

Section 3 – Enforcement Response

You must take immediate action to rectify any non-compliance and prevent repetition. Non-compliance with your permit conditions constitutes an offence and can result in criminal prosecutions and/or suspension or revocation of a permit. Please read the detailed assessment in Section 2 and the steps you need to take in Section 4 below.

Other than the provision of advice and guidance, at present we do not intend to take further enforcement action in respect of the non-compliance identified above. This does not preclude us from taking enforcement action if further relevant information comes to light or advice isn't followed.

Section 4 – Action(s)

This section summarises the actions identified during the assessment along with the timescales for when they will need to be completed.

Criteria Ref.	CCS Category	Action required/advised	Due Date
See Section 1 above			

Section 5 – Compliance notes for the Operator

To ensure you correct actual or potential non-compliance we may

- Advise on corrective actions verbally or in writing
- Require you to take specific actions verbally or in writing
- Issue a notice
- Require you to review your procedures or management system
- Change some of the conditions of your permit
- Decide to undertake a full review of your permit

Any breach of a permit condition is an offence and we may take legal action against you

- We will normally provide advice and guidance to assist you to come back into compliance either after an offence is committed or where we consider that an offence is likely to be committed. This is without prejudice to any other enforcement response that we consider may be required.
- Enforcement action can include the issue of a formal caution, prosecution, the service of a notice and/or suspension or revocation of the permit.

See our Enforcement and Civil Sanctions guidance for further information

This report does not relieve the site operator of the responsibility to

- Ensure you comply with the conditions of the permit at all times and prevent pollution of the environment
- Ensure you comply with other legislative provisions which may apply

Non-compliance scores and categories

CCS category	Description	Score
C1	A non-compliance that could have a major environmental effect	60
C2	A non-compliance which could have a significant environmental effect	31
C3	A non-compliance which could have a minor environmental effect	4
C4	A non-compliance which has no potential environmental effect	0.1

Operational Risk Appraisal (Opra) - Compliance assessment findings may affect your Opra score and/or your charges. This score influences the resource we use to assess permit compliance.

Section 6 – General information

Data protection notice

The information on this form will be processed by the Natural Resources Wales (NRW) to fulfil its regulatory and monitoring functions and to maintain the relevant public register(s). The NRW may also use and/or disclose it in connection with:

- Offering/providing you with its literature/services relating to environmental matters
- Consulting with the public, public bodies and other organisations (eg. Health and Safety Executive, local authorities) on environmental issues
- Carrying out statistical analysis, research and development on environmental issues
- Providing public register information to enquirers
- Investigating possible breaches of environmental law
- Assessing customer service satisfaction and improving its service
- Freedom of Information Act/Environmental Regulations request

The NRW may pass it on to its agents/representatives to do these things on its behalf. You should ensure that any persons named on this form are informed of the contents of this data protection notice.

Disclosure of information

The NRW will provide a copy of this report to the public register(s). However, if you consider that any information contained in this report should not be released to the public register(s) on the grounds of commercial confidentiality, you must write to your local area office within fifteen working days of receipt of this form indicating which information it concerns and why it should not be released, giving your reasons in full.

Customer charter

What can I do if I disagree with this compliance assessment report?

If you are unable to resolve the issue with your site officer, you should firstly discuss the matter with officer's line managers using the informal appeals procedure. If you wish to raise your dispute further through our official Complaints and Commendations procedure, phone our general enquiry number 0300 065 3000 (Mon to Fri 08.00 – 18.00) and ask for the Customer Contact team or send an email to enquiries@naturalresourceswales.gov.uk. If you are still dissatisfied you can make a complaint to the Public Services Ombudsman for Wales. For advice on how to complain to the Ombudsman phone their helpline on 0845 607 0987.

Welsh Language

If you would like this form in Welsh please contact your Regulatory Officer.